

Appl. No.: 10/720,473
Amdt. Dated: June 1, 2007
Reply to Office Action of March 1, 2007

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1 and 2. The attached Replacement Sheets, which includes Figures 1-9, replace the original sheets that include Figures 1-9. In Figures 1 and 2, reference number **17** has been added to identify a feature described in the specification. In Figure 1, original reference number **8** has been changed to **18** to be consistent with the specification and the other figures.

Attachment: Replacement Sheets 1/6 (FIGS. 1-3), 2/6 (FIG. 4), 3/6 (FIG. 5), 4/6 (FIGS. 6 and 7), 5/6 (FIG. 8), and 6/6 (FIG. 9).

REMARKS

The Office Action rejected Claims 1-13 as either being anticipated or rendered obvious by various combinations of the cited references. In this regard, Claims 1-4 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 815,619 to Mueser ("Mueser"). Claims 5-7 and 9-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mueser in view of U.S. Patent No. 6,880,224 to Colarusso et al. ("Colarusso"). Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mueser in view of Colarusso and further in view of U.S. Patent Application Publication No. 2003/0012596 to Copping ("Copping"). The Office Action further rejected Claim 5 under 35 U.S.C. § 112, second paragraph, as being indefinite and the Office Action objected to the ordering of Claims 10-12. The Office Action also objected to the drawings under 37 CFR 1.83(a) for failing to show a feature recited in independent Claim 1.

As described in detail below, the Drawings and the Specification have been amended to address the objection to the drawings. Claim 5 has been amended to overcome the rejection under § 112 of Claim 5 and Claims 10-12 have been amended to address the Office Action's objection to the ordering of Claims 10-12. With regard to the substantive rejections of Claims 1-13, however, Applicant respectfully submits that no combination of the cited references teaches or suggests the claimed invention of independent Claims 1 and 9, and the dependent claims depending therefrom. In light of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration of the present application and allowance of the current set of claims.

I. The objection to the Drawings is overcome by the amendments to the Specification and Figures 1 and 2.

Figures 1 and 2 have been amended to more clearly identify the longitudinally extending gap described in paragraph 0030 of the specification. In this regard, reference number 17 has been added to the specification and to Figures 1 and 2 so that the longitudinally extending gap is more easily identifiable in the figures. As described in paragraph 0030 of the specification, the reinforcing bar 10 illustrated in Figures 1 and 2 has two opposed series of inclined transverse ribs 12. The two series are separated by a longitudinally extending gap 17. A longitudinally

extending rib 18 is disposed within the longitudinally extending gap 17. Therefore, Figures 1 and 2 clearly illustrate an embodiment of the longitudinally extending gap recited in independent Claim 1. Since the amendments to the drawings and the specification merely add a reference number for identifying a feature that was already in the original figures and described in the original specification, no new matter has been added. As such, Applicant requests that the objection to the drawings be withdrawn.

II. Claims 10, 11, and 12 have been amended to reverse the order of Claims 9 and 10 to overcome the objection to Claims 10-12.

The Office Action objected to the order of the claims since Claims 12 and 13 depend from Claim 10 while Claim 11 depends from Claim 9. Applicant has amended Claims 10 and 11 to reverse the order of these claims. Applicant has also amended Claim 12 so that this claim now depends from amended Claim 11 (original Claim 10). As such, Applicant submits that the claims are now in the order suggested by the MPEP.

III. Claim 5 has been amended to clarify the claim language and, thereby, overcome the rejection of Claim 5 under 35 U.S.C. § 112, second paragraph.

Claim 5 was rejected as being indefinite for not being clear as to which ribs Claim 5 was referring to by the term “said ribs.” Claim 5 has been amended to clarify that “said ribs” refers to the longitudinally extending ribs of the reinforcing bar. As such, Applicant submits the § 112 rejection has been overcome.

IV. The cited references, viewed alone or in combination, do not teach or suggest the claimed invention.

In general, embodiments of the present invention are directed to a reinforcing bar 10, such as that used to reinforce concrete, having inclined transverse ribs 12 that generally form a thread that spirals around a core 20. *See, e.g.*, Figures 1-3. The bar 10 further includes at least one longitudinally extending rib 18 that extends longitudinally along the outside of the core 20 thereby interrupting the transverse ribs 12 and obstructing the thread created by the transverse ribs 12. *See, e.g.*, Figures 1-3. At an end of the bar 10, the longitudinally extending rib 18 is at

least partially removed such that an internally threaded member 26, such as nut 40, can be threaded onto the end of the bar 10 without removing all of the transverse ribs on the core 20. In one embodiment, the longitudinally extending rib 18 is at least partially removed from the end of the bar 10 by removing (or not forming) the portions of the longitudinally extending rib 18 that are located in the troughs 13 adjacent to an end of the bar 10. *See, e.g.*, Figures 3 and 4. In another embodiment, the longitudinally extending rib 18 is at least partially removed from the end of the bar 10 by removing (or not forming) the longitudinally extending rib 18 for some distance adjacent to the end of the bar 10. In such an embodiment, the inclined transverse ribs 12 may be separated by a longitudinally extending gap in the thread, but the thread created by the transverse ribs 12 would be unobstructed and permit an internally threaded member to be threaded onto the end of the bar 10. *See, e.g.* Figures 5 and 7.

In this regard, independent Claim 1 is directed to a reinforcing bar having at least two series of transverse ribs on a core. Claim 1 recites that the ribs in each series are aligned and spaced longitudinally along the bar and separated by troughs. Claim 1 further recites that the ribs are angled and aligned to form a pattern of threads along the bar. Claim 1 further recites that the at least two series of transverse ribs are separated from each other by longitudinally extending gaps and that a longitudinally extending rib is disposed in each longitudinally extending gap. Claim 1 then recites that each longitudinally extending rib is interrupted adjacent at least one end of the bar such that an internally threaded member may be threaded onto the pattern of threads at the end of the bar.

Similarly, independent Claim 9 is directed to a reinforcing bar having a transversely extending rib forming a pattern of threads on the bar. Claim 9 recites that the reinforcing bar has a longitudinally extending rib that interrupts the transversely extending rib at multiple areas along the bar, thereby, interrupting the pattern of threads along the bar. Claim 9 further recites that at least a portion of the longitudinally extending rib is absent from a section of the bar adjacent at least one end of the bar such that the pattern of threads is unobstructed in the section of the bar adjacent the at least one end of the bar.

The Office Action rejects independent Claim 1 as being anticipated by the Mueser reference. The Mueser reference illustrates a reinforcing bar having a core 21 and inclined transverse ribs 22, 23 separated by troughs. The Mueser reference also discloses that the ribs 22,

23 are separated by two longitudinally extending ribs 24. The Mueser reference, however, does not disclose that each longitudinally extending rib is interrupted adjacent at least one end of the bar such that an internally threaded member may be threaded onto the pattern of threads formed by the inclined transverse ribs at the end of the bar, as recited by independent Claim 1. In fact, the reinforcing bar taught by Mueser is nothing more than the reinforcing bar described in the background section of the present application. *See* ¶ 0003 of the present application. Mueser does not teach or suggest that the transverse ribs 22, 23 form a thread pattern that can be used to selectively thread an internally threaded member onto the end of the bar, as recited by independent Claim 1. The Mueser reference instead teaches how the ribs on the bar are present to prevent the bar from the twisting or pulling out of the concrete. *See, e.g.*, Mueser, page 2, lines 7-8. Moreover, the Mueser reference does not teach or suggest that the longitudinally extending rib is interrupted adjacent an end of the bar such that an internally threaded member may be selectively threaded onto the transverse ribs adjacent the end of the bar, as recited by independent Claim 1. When rejecting independent Claim 1, the Office Action ignores these recitations of independent Claim 1. Therefore, as described above, independent Claim 1, as well as the claims that depend therefrom, is not anticipated by the Mueser reference.

The Office Action rejects independent Claim 9 as being unpatentable over a combination of the Mueser and the Colarusso references. As described above, the Mueser reference does not teach or suggest interrupting the longitudinally extending rib such that the transverse ribs form an unobstructed thread pattern, as generally recited by both independent Claim 1 and independent Claim 9.

The Colarusso reference discloses a reinforcing bar having transverse ribs and a longitudinally extending rib. Like Mueser, however, the Colarusso reference also does not teach or suggest interrupting the longitudinally extending rib such that the transverse ribs form an unobstructed thread pattern. Although Colarusso does describe the formation of a thread adjacent an end of the bar, Colarusso discloses completely removing the transverse ribs and the longitudinally extending ribs so that a thread can be formed in the core of the bar. In this regard, the Colarusso reference merely discloses the type of bar described in paragraph 0006 of the background section of the present application. This type of bar is different from the claimed bar since it does not use the transverse ribs as the threads, as recited in independent Claims 1 and 9

of the present application. Therefore, since neither the Colarusso reference nor the Mueser reference teach or suggest, either alone or in combination, interrupting the longitudinally extending rib such that the inclined transverse ribs form an unobstructed thread pattern, no combination of the Colarusso and Mueser references teach or suggest the invention claimed in independent Claims 1 and 9.

The Copping reference describes a fixture for connecting two reinforcing bars 2 in an end-to-end relationship. *See* Copping, Figure 4. The bars described in the Copping reference do not have longitudinally extending ribs. Furthermore, the two series of transverse ribs 4 on the bar in Copping are specifically configured to have opposite angles so that the transverse ribs do not form a thread around the core that would be capable of “unscrewing” from the concrete. *See* Copping, ¶ 0040. Therefore, since Copping does not teach or suggest a longitudinal rib and since Copping teaches transverse ribs that cannot form a thread, Copping does not teach or suggest interrupting a longitudinally extending rib such that the inclined transverse ribs form an unobstructed thread pattern, as generally recited by independent Claims 1 and 9. Indeed, Copping is not cited in the Office Action as teaching or suggesting these features of the claimed invention.

Therefore, as described above, none of the cited references teach or suggest a reinforcing bar having inclined transverse ribs and longitudinal ribs where the longitudinally extending rib is interrupted such that the inclined transverse ribs form an unobstructed tread pattern, as recited by independent Claims 1 and 9. As such, Applicant respectfully requests that the Examiner withdraw the rejections of independent Claims 1 and 9, as well as Claims 2-8 and 10-13 that depend therefrom, as being anticipated or rendered obvious by the cited references.

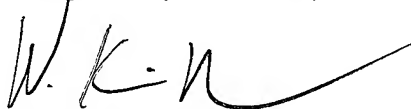
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CONCLUSION

In view of the amendments to the application and the foregoing remarks, it is respectfully submitted that all of the claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 13-4365.

Respectfully submitted,



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